

10. An appliance provided with a transponder which comprises an integrated circuit, an antenna, and a first capacitor, wherein a transponder as claimed in any one of the preceding claims is present therein.

REMARKS

Claim 3 stands rejected under 35 U.S.C 112, second paragraph, as being indefinite. Claims 1, 4 and 10 stand rejected under 35 U.S.C 102(a) over Bickley et al. (U.S. Patent No. 5,430,441). Claims 1-10 are pending.

Applicants have amended the claims to obviate the objections by the Examiner.

Applicants appreciate the Examiner's indication that claims 2, 5-7 and 9 would be allowable if rewritten to overcome the objections and that claim 3 would be allowable if rewritten to overcome the rejection and objection. In response these claim have been so amended. In addition, claims 4 and 8 now depend form one or the other of independent claims discussed above and are, therefore, believed allowable and patentable for at least the same reasons.

On the merits, applicants respectfully submit that the pending claims, as amended, are patentable for at least the following reasons.

Amended independent claim 1 is directed to a transponder provided with an integrated circuit, an antenna, and a first capacitor provided with a dielectric and a first and a second capacitor electrode, which transponder comprising a stack of layers including a first layer of a dielectric material, a first patterned electrically conductive layer of which the antenna forms part, a second layer of a dielectric material, and a second patterned electrically conductive layer, wherein the second patterned layer comprises the second capacitor electrode and a first electrode of the integrated circuit, which enables the integrated circuit to be processed on the second layer.

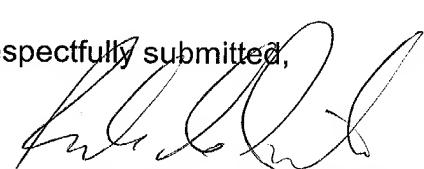
Applicants can find nothing in Bickley that teaches that the second patterned layer comprises the second capacitor electrode and a first electrode of the integrated circuit, which enables the integrated circuit to be processed on the second layer.

Since Garcia, Bickley, does not teach, show or suggest all of the features of amended independent claim 1, as recited above, applicant respectfully submits that this claim is patentable over these references.

Claim 10 in this application is dependent from claim 1 discussed above and is, therefore, believed allowable and patentable for at least the same reasons.

The applicants have made a sincere attempt to advance the prosecution of this application by reducing the issues for consideration and specifically delineating the zone of patentability. The applicants submit that the claims, as they now stand, fully satisfy the requirements of 35 U.S.C. 112 and 102. In view of the foregoing amendments and remarks, favorable reconsideration and early passage to issue of the present application are respectfully solicited.

Respectfully submitted,


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VERSION WITH MARKING TO SHOW CHANGES MADE

IN THE CLAIMS

Please amend the claims as follows:

1. (Amended) A transponder (10, 110, 210) provided with an integrated circuit (20, 120, 220), an antenna (12, 112, 212), and a first capacitor (11, 111, 211) provided with a dielectric and a first and a second capacitor electrode (22, 122, 222; 24, 124, 224), which transponder comprises:
— a stack of layers including, i.e.:
 - a first layer (1, 101, 201) of a dielectric material,
 - a first patterned electrically conductive layer (2, 102, 202) of which the antenna (12, 112, 212) forms part,
 - a second layer (3, 103, 203) of a dielectric material, and
 - a second patterned electrically conductive layer (4, 104, 204),
characterized in that wherein
— the second patterned layer (4, 104, 204) comprises the second capacitor electrode and a first electrode (14, 114, 214) of the integrated circuit, which enables the integrated circuit to be processed on the second layer (20, 120, 220) and the second capacitor electrode (24, 124, 224).
2. (Amended) A transponder provided with an integrated circuit, an antenna, and a first capacitor provided with a dielectric and a first and a second capacitor electrode, which transponder comprises a stack of layers, i.e.:
— a first layer of a dielectric material,
— a first patterned electrically conductive layer of which the antenna forms part,
— a second layer of a dielectric material,
— a second patterned electrically conductive layer,

wherein the second patterned layer comprises the second capacitor electrode and a first electrode of the integrated circuit; A transponder (10, 210) as claimed in claim 1, characterized that wherein,

- the first patterned layer (2, 202) comprises the first and a third capacitor electrode (22, 222; 32, 232),
- the second patterned layer (4, 204) comprises a fourth capacitor electrode (34, 234),
- the third and the fourth capacitor electrodes (32, 232; 34, 234) form a second capacitor (13, 213) in conjunction with the second layer of dielectric material (3, 203),
- the first capacitor (211) forms a first connection (231) between the integrated circuit (220) and the antenna (212), and
- the second capacitor (213) forms a second connection (261) between the antenna (212) and the integrated circuit (220).

3. (Amended) A transponder (210) as claimed in claim 2, characterized in that wherein the antenna includes the first and the third capacitor electrode (222; 232) at the same time form the antenna (212).

4. (Amended) A transponder (10, 110, 210) as claimed in claim 1 or 3, characterized in that wherein the first patterned layer (2, 102, 202) occupies a larger surface area than does the second patterned layer (4, 104, 204).

5. (Amended) A transponder provided with an integrated circuit, an antenna, and a first capacitor provided with a dielectric and a first and a second capacitor electrode, which transponder comprises a stack of layers, i.e.:
a first layer of a dielectric material,
a first patterned electrically conductive layer of which the antenna forms part,
a second layer of a dielectric material, and
a second patterned electrically conductive layer,

wherein the second patterned layer comprises the second capacitor electrode and a first electrode of the integrated circuit; A transponder (10, 110) as claimed in claim 1 or 2, wherein characterized in that
the integrated circuit (20, 120) comprises a second electrode (15, 115),
a stack including of a semiconducting layer (6, 106), a third layer (5, 105) of dielectric material, and a third patterned electrically conductive layer (7, 107) that comprisesing the second electrode (15, 115) of the integrated circuit (20, 120) is present on the second patterned layer (4, 104); and
a fourth layer (8, 108) of dielectric material is present on said stack.

6. (Amended) A transponder (10, 110) as claimed in claim 5,
characterized in thatwherein the semiconducting layer (5, 105) comprises an organic material.

7. (Amended) A transponder (10, 110) as claimed in claim 5,
characterized in thatwherein at least one of the patterned layers (2, 102; 4, 104; 7, 107) comprises a doped organic polymeric material.

8. (Amended) A transponder (10, 110) as claimed in claim 5,
characterized in thatwherein
- edge zones (36, 136; 37, 137) of the first layer of dielectric material (1, 101) and edge zones (38, 138; 39, 139) of the second layer of dielectric material (3, 103) are adhered to one another, and
- a substantially uninterrupted protective layer comprising the first and the fourth layer of dielectric material (1, 101; 8, 108) is present.

9. (Amended) A transponder (10) as claimed in claim 4, characterized in thatwherein
- the first patterned layer (2) comprises a first contact surface (23),
- the second patterned layer (4) comprises a second contact surface (25),
and

- the first and the second contact surfaces (23, 25) are in contact with each one another.

10. (Amended) An appliance provided with a transponder (10, 110, 210) which comprises an integrated circuit (20, 120, 220), an antenna (12, 112, 212), and a first capacitor (11, 111, 211),
~~characterized in that~~wherein a transponder (10, 110, 210) as claimed in any one of the preceding claims is present therein.